



## SEQUENCE LISTING

<110> Murphy, Dennis  
Reid, John

<120> ALPHA GALACTOSIDASES AND METHODS FOR  
MAKING AND USING THEM (Amended)

<130> 09010-004005

<140> US 09/886,400

<141> 2001-06-20

<150> US 09/407,806

<151> 1999-09-28

<150> US 08/613,220

<151> 1996-03-08

<160> 4

<170> FastSEQ for Windows Version 4.0

<210> 1

<211> 52

<212> DNA

<213> Artificial Sequence

<220>

<223> synthetically generated oligonucleotide

<400> 1

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52

<210> 2

<211> 31

<212> DNA

<213> Artificial Sequence

<220>

<223> synthetically generated oligonucleotide

<400> 2

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31

<210> 3

<211> 1095

<212> DNA

<213> Thermococcus alcaliphilus

<400> 3

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ccttttgggc tcaacataac gggctatacc ttaaagttcc tccgaagga tattatagac  
ctcgttaaag ggggcatcgc gagtgacctg atagagataa tcggaacgag ctacacgcac  
gcaataactcc ccctcctgcc gcttagcaga gtagaagcac aagttcagag agatagggaa

60  
120  
180  
240  
300

gttaaggaag	agctcttcga	ggtttctcca	aagggattct	ggctgccaga	gctcgcctat	360
gacccgataa	tccttgccat	actgaaggac	aacggttatg	agtatctatt	cgccgacggg	420
gaggcgatgc	ttttctcagc	tcctctcaac	tcggcgataa	agccaattaa	accgctctat	480
ccacacctta	taaaggccca	aagggaaaag	cgcttttaggt	acatcagcta	tctccttggt	540
ctcagggagc	ttaggaaggc	gataaagctc	gtttttgaag	gtaaggtaac	gctaaaggca	600
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aacattcttc	tatacggcac	cgatatagag	ttcattggct	atagggacat	tgcaggctac	780
agaatgagtg	ttgagggatt	attagaggtt	atagacgagc	tcaactcgga	actgtgcctt	840
ccctcagagc	tgaagcacag	tggaagggag	ctctacttac	ggacttcgag	ttgggcacca	900
gataagagct	tgaggatatg	gagagaggac	gaagggaaacg	caagacttaa	tatgctgtcc	960
tacaatatga	ggggcgaact	cgccttttta	gccgagaaca	gcgatgcaag	gggatgggag	1020
cccctccctg	agaggaggct	ggatgccttc	cgggcgatat	ataacgattg	gaggggtgaa	1080
aatggggaac	cttag					1095

&lt;210&gt; 4

&lt;211&gt; 364

&lt;212&gt; PRT

&lt;213&gt; Thermococcus alcaliphilus

&lt;400&gt; 4

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Lys	Ser	Glu	Ile	Pro	Lys	Val	Ile	Glu	Lys	Ala	Tyr	Ile	Pro	Val	Ile
		20						25					30		
Glu	Thr	Leu	Ile	Lys	Glu	Glu	Ile	Pro	Phe	Gly	Leu	Asn	Ile	Thr	Gly
	35					40						45			
Tyr	Thr	Leu	Lys	Phe	Leu	Pro	Lys	Asp	Ile	Ile	Asp	Leu	Val	Lys	Gly
	50					55					60				
Gly	Ile	Ala	Ser	Asp	Leu	Ile	Glu	Ile	Ile	Gly	Thr	Ser	Tyr	Thr	His
65					70					75					80
Ala	Ile	Leu	Pro	Leu	Leu	Pro	Leu	Ser	Arg	Val	Glu	Ala	Gln	Val	Gln
			85					90						95	
Arg	Asp	Arg	Glu	Val	Lys	Glu	Glu	Leu	Phe	Glu	Val	Ser	Pro	Lys	Gly
		100						105					110		
Phe	Trp	Leu	Pro	Glu	Leu	Ala	Tyr	Asp	Pro	Ile	Ile	Pro	Ala	Ile	Leu
	115						120					125			
Lys	Asp	Asn	Gly	Tyr	Glu	Tyr	Leu	Phe	Ala	Asp	Gly	Glu	Ala	Met	Leu
	130					135					140				
Phe	Ser	Ala	His	Leu	Asn	Ser	Ala	Ile	Lys	Pro	Ile	Lys	Pro	Leu	Tyr
145					150					155					160
Pro	His	Leu	Ile	Lys	Ala	Gln	Arg	Glu	Lys	Arg	Phe	Arg	Tyr	Ile	Ser
			165					170						175	
Tyr	Leu	Leu	Gly	Leu	Arg	Glu	Leu	Arg	Lys	Ala	Ile	Lys	Leu	Val	Phe
		180						185					190		
Glu	Gly	Lys	Val	Thr	Leu	Lys	Ala	Val	Lys	Asp	Ile	Glu	Ala	Val	Pro
	195						200					205			
Val	Trp	Val	Ala	Val	Asn	Thr	Ala	Val	Met	Leu	Gly	Ile	Gly	Arg	Leu
	210					215					220				
Pro	Leu	Met	Asn	Pro	Lys	Lys	Val	Ala	Ser	Trp	Ile	Glu	Asp	Lys	Asp
225					230					235					240
Asn	Ile	Leu	Leu	Tyr	Gly	Thr	Asp	Ile	Glu	Phe	Ile	Gly	Tyr	Arg	Asp
			245						250					255	
Ile	Ala	Gly	Tyr	Arg	Met	Ser	Val	Glu	Gly	Leu	Leu	Glu	Val	Ile	Asp
		260						265					270		
Glu	Leu	Asn	Ser	Glu	Leu	Cys	Leu	Pro	Ser	Glu	Leu	Lys	His	Ser	Gly
		275					280						285		

